

# A REVISION OF THE AUSTRALIAN GENUS *STENASPIDIUS* WESTWOOD (COLEOPTERA, SCARABAEIDAE, GEOTRUPINAE)

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## ABSTRACT

HOWDEN, H. F. 1974. A revision of the Australian genus *Stenaspidius* Westwood (Coleoptera, Scarabaeidae, Geotruperinae). *Rec. S. Aust. Mus.*, 17 (2): 11-21.

The Australian genus *Stenaspidius* Westwood is revised, and the species are keyed and illustrated. Five species are recognized: *S. nigricornis* Westwood from southern Western Australia, *S. brittoni* n. sp. from southern Western Australia, *S. matthewsi* n. sp. from west central Western Australia, *S. ruficornis* Boucomont from South Australia, Victoria and New South Wales and *S. albosetosus* n. sp. from the northern portions of Queensland, Northern Territory and Western Australia.

## INTRODUCTION

On 21st March, 1848, J. O. Westwood read a paper entitled "On the Australian species of the coleopterous genus *Bolboceras*, Kirby" in which he described as new the species *Bolboceras* (*Stenaspidius* [new subgenus]) *nigricornis*. A short version of this paper which validated the names was published in 1848 in *The Annals and Magazine of Natural History*, Volume 2. An expanded version of the same paper, including figures, was subsequently published in 1852 in *The Transactions of the Linnean Society of London*, Volume 21. In 1856 Lacordaire gave *Stenaspidius* Westwood generic rank, and subsequent authors have concurred with this. In 1906 a second Australian species, *S. ruficornis*, was described by Boucomont. Paulian (1939) described a third species, *S. wagneri*, from South America which was later correctly synonymized by Martínez (1952) under *Athyreus ruficollis* Bruch (1925). At the same time Martínez transferred *ruficollis* into the genus *Stenaspidius*. Recent studies have shown that *ruficollis* is not congeneric with the Australian species and it has been transferred to a separate genus *Bolbothyreus* (Howden, 1974). *Stenaspidius*, as presently constituted, is an endemic Australian genus containing five species.

A number of people have assisted me with the present study and their generous help is gratefully acknowledged. In the following list of persons and institutions lending material, the abbreviations in parentheses are those used in the text:

E. B. Britton, Australian National Insect Collection, Division of Entomology, CSIRO, Canberra (ANIC).

A. Descarpentries, Muséum National d'Histoire Naturelle, Paris (MNHN).

G. Holloway, The Australian Museum, Sydney (AM).

L. E. Koch, The Western Australian Museum, Perth (WAM).

E. G. Matthews, South Australian Museum, Adelaide (SAM).

A. Neboiss, National Museum of Victoria, Melbourne (NMV).

R. Pope, British Museum (Natural History), London (BM).

K. T. Richards, Entomology Branch Department of Agriculture, W.A., South Perth (DAWA).

T. Weir and N. Forrester, Entomology Section, Agriculture Branch, Northern Territory Administration, Darwin (NTA).

I am particularly indebted to E. G. Matthews and G. F. Gross of the South Australian Museum for support for field work in July and August, 1972, and for the use of their facilities, and to E. B. Britton, CSIRO, Division of Entomology, for the use of facilities at Canberra.

The scanning electron microscope pictures used herein were taken by L. E. C. Ling, Carleton University. This work has been supported, in part, by an operating grant from the National Research Council of Canada.

## SYSTEMATIC TREATMENT

### *Stenaspidius* Westwood

Westwood, J. O., 1848, p. 144; 1852, p. 17.

Lacordaire, T., 1856, p. 141.

Martínez, A., 1952, p. 326 (Catalogue of references to genus).

Howden, H. F., 1974, p. 1567.

Type-species, *Bolboceras* (*Stenaspidius*) *nigricornis* Westwood, 1848, by monotypy.

Major characters that separate *Stenaspidius* from other genera in the tribe Bolboceratini are as follows: Each mandible moderately to distinctly lobed on outer margin; labrum with irregular transverse carina, at least in median half; clypeus slanting slightly to abruptly upwards to posterior carina, the carina often with median and lateral horns or tubercles; gena rounded or angulate; vertex with at least an indication of median horn; pronotum with complete marginal line, pronotal midline poorly to deeply indented; scutellum approximately twice as long as wide; each elytron with five striae between suture and humeral umbone, intervals broadly convex; fore tibia with five teeth on outer margin; middle and hind tibiae each with one complete subapical transverse carina on outer surface; middle coxae distinctly separated by metasternum. External sexual differences slight; in many males apex of the genital capsule visible between pygidium and last sternite.

The elongate scutellum will separate *Stenaspidius* from all other genera of Australian Geotrupinae except for the genus *Gilletinus* Boucomont. The broadly convex elytral intervals and five narrow striae between the suture and humeral umbone separate *Stenaspidius* from *Gilletinus* which has seven deep, broad, heavily punctate striae (instead of five) and abruptly convex elytral intervals.

The various species of *Stenaspidius* are poorly represented in collections. Adults come occasionally to light. Specimens are best collected by excavating their burrows and, in some cases at least, a number of adults have been found in a single burrow. The meagre data available indicates that the genus occurs (see map) most frequently in sandy soils in areas in which the rainfall exceeds 250 mm per year.

Key to the species of *Stenaspidius*

- 1. Frons, vertex and pronotum with scattered clumps of coarse punctures; much of vertex and central portion of pronotum impunctate or finely punctate . . . . . 2
- Frons, vertex, and pronotum relatively evenly, coarsely, heavily punctate (Fig. 5), less so near posterior margin of pronotum; Kalbarri area, W.A.
  - 2. (1) Metasternum anteriorly elevated into a sharp, abruptly angulate point (e.g. Fig. 22); occurring in southern half of Western Australia . . . . . 3
  - Metasternum rounded or carinate anteriorly but with apex (viewed laterally) rounded, not sharply angulate to vertical face (Figs. 23, 24); occurring in northern or eastern Australia . . . . . 4

- 3. (2) Horn on vertex (Fig. 2) distinctly transverse, usually slightly bifid at apex; male genitalia as in Fig. 20

*Stenaspidius nigricornis* Westwood

Horn on vertex (Fig. 3) longitudinal with base extending anteriorly, apex evenly rounded; male genitalia as in Fig. 18

*Stenaspidius brittoni* n. sp.

- 4. (2) Posterior clypeal carina well developed, distinctly narrowed, the three horns obsolete and close together; metasternum distinctly carinate anteriorly; occurring in south-eastern Australia

*Stenaspidius ruficornis* Boucomont

Posterior clypeal carina poorly developed except for distinctly, widely separated horns; metasternum rounded anteriorly; occurring across northern Australia

*Stenaspidius albosetosus* n. sp.

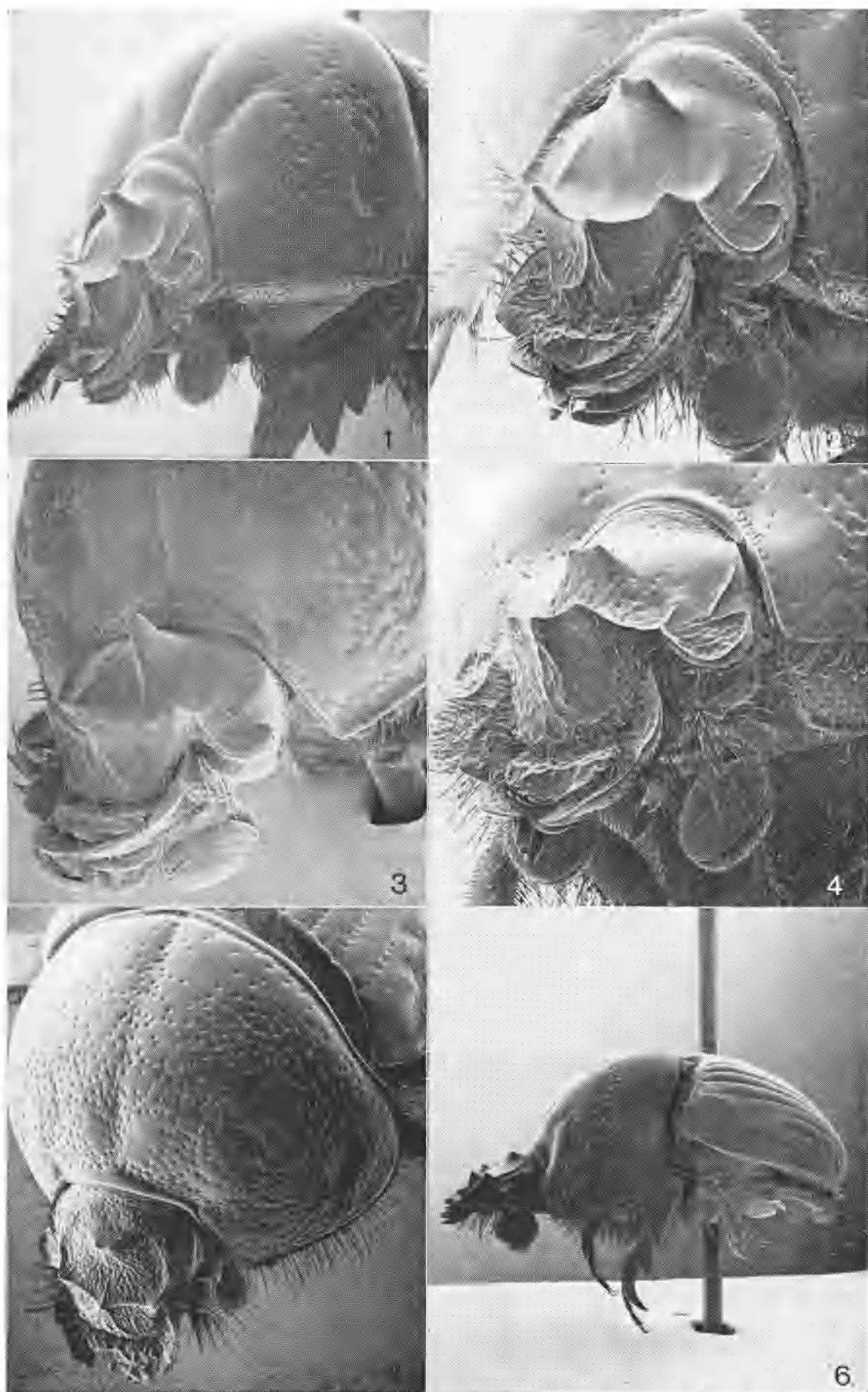
***Stenaspidius nigricornis* Westwood**

(Figs. 1, 2, 19, 20, 22)

*Bolboceras (Stenaspidius) nigricornis* Westwood, 1848, p. 144; 1852, p. 17.

*Stenaspidius nigricornis* Westwood, Boucomont, 1932, p. 264.

Males: Length 7.6 to 9.1 mm; greatest width 4.5 to 6.1 mm. Colour usually black, occasionally very dark brown; antennae and tarsi usually very dark brown. Clypeus (Fig. 2) rising at 45° to 55° angle to posterior carina; carina, in large specimens, with three low horns, median horn anterior in position. Face of clypeus on each side with U-shaped carina extending from median to lateral horn, the area encompassed usually as wide as deep or wider. Frons and vertex behind clypeal horns concave anterior to horn on vertex. Gena, frons, and vertex with scattered minutely or moderately sized punctures. Horn on vertex transverse, often pronounced (particularly in large specimens) and slightly bifid at apex (Fig. 2). Pronotum with midline distinctly indented, punctate; on each side on anterior third behind eyes a distinct, punctate indentation delimits an impunctate convexity (Fig. 1); pronotum in anterior lateral two-thirds moderately to heavily, irregularly punctate. Scutellum longitudinally shallowly concave; concave surface dull, often with vague, small punctures. Elytral striae moderately indented, finely punctate; intervals moderately convex, impunctate, smooth to vaguely transversely wrinkled. Metasternum (Fig. 22) narrowed anteriorly to sharply pointed apex, anterior face nearly vertical, slightly indented near apex. Genital capsule (Fig. 19) evenly narrowed to abruptly rounded apex. Genitalia (Fig. 20) with upper lobe of each paramere narrowed, then dorso-ventrally expanding near pointed apex.



Figs. 1-6. *Stenaspidium* spp: 1, Head and pronotum of *S. nigricornis*; 2, Head of *S. nigricornis*; 3, Head of *S. brittoni*; 4, Head of *S. ruficornis*; 5, Head and pronotum of *S. matthewsi*; 6, Lateral view of *S. albosetosus*.

Females: Length 7.8 to 10.5 mm, greatest width 4.8 to 6.9 mm. Variation in females similar to that described for males, horns of small females being poorly developed, those of large females well developed. External sexual differences negligible.

*Stenaspidius nigricornis* can be distinguished by the following combination of characters: metasternum (Fig. 22) anteriorly narrowed to acutely pointed apex, anterior face nearly vertical, slightly indented by apex; posterior clypeal carina well developed, the three clypeal horns of the carina obtuse, not greatly elevated above the carina, the two lateral horns directly above the mandibular insertions; horn on vertex transverse, usually well developed (Fig. 2) and slightly bifid at apex; male genitalia (Fig. 20) very distinctive.

*Type*: Holotype, female, Swan River, No. 507 (Hope Museum, Oxford); specimen examined February, 1973.

*Material examined*: Thirty-one specimens bearing only the following data: 1—Australia; 3—S.W. Australia; 1—Australia Orient., February, 1896, Muller; 1—Nov. Holl. Occid.; 2—Albany, W.A.; 1—Bedfordale, W.A., March, 1951, W. M. O'Donnell; 1—Calgardup, 40—1580; 1—Deepdene, Karridale, W.A., 14th October, 1962, L. M. O'Halloran; 4—King George Sound (nr. Albany), W.A.; 2—Mundaring, W.A., J. Clark; 1—Nedlands, W.A., 27th November, 1939, P. N. Forte; 1—Pearce, Bullsbrook, W.A., 13th January, 1966, O. W. Richards; 1—Salmon Gums, 43—1226; 1—South Perth, W.A., 20th December, 1902, H. M. Giles; 2—Swan River, W.A., J. Clark; 1—Vasse; 2—Warren R. (nr. Pemberton?), W.A., W. D. Dodd; 4—William Bay, W.A., 31st October, 1967, E. Matthews; 1—Yallingup, S.W. Australia, 1st-12th December, 1913, R. F. Turner.

Specimens are in the following collections: ANIC, BM, DAWA, MNHN, NMV, SAM, WAM and Howden.

#### *Stenaspidius brittoni* n. sp.

(Figs. 3, 17, 18)

*Holotype*: Male, length 8.7 mm, greatest width 5.0 mm. Colour dark to very dark brown except dorsum of head and pronotum black. Clypeus (Fig. 3) rising abruptly to three horns at posterior margin; median horn anterior in position, with U-shaped carina on each side extending nearly to anterior margin of clypeus

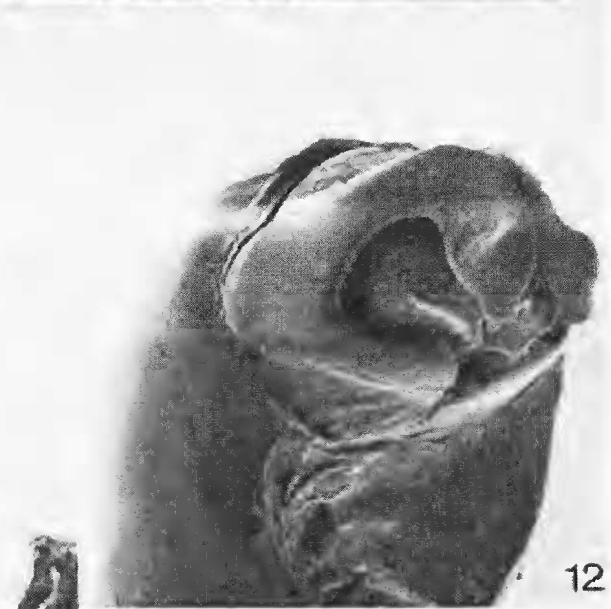
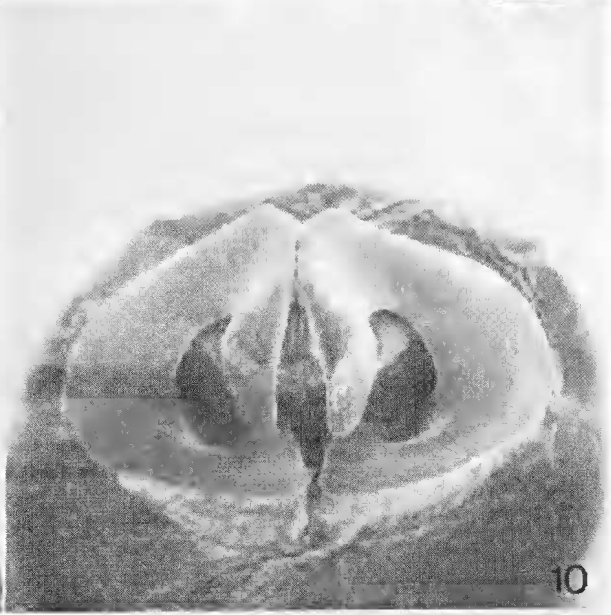
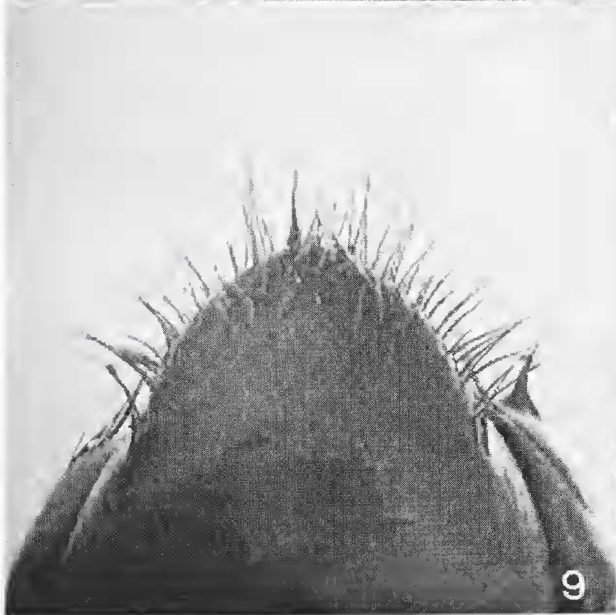
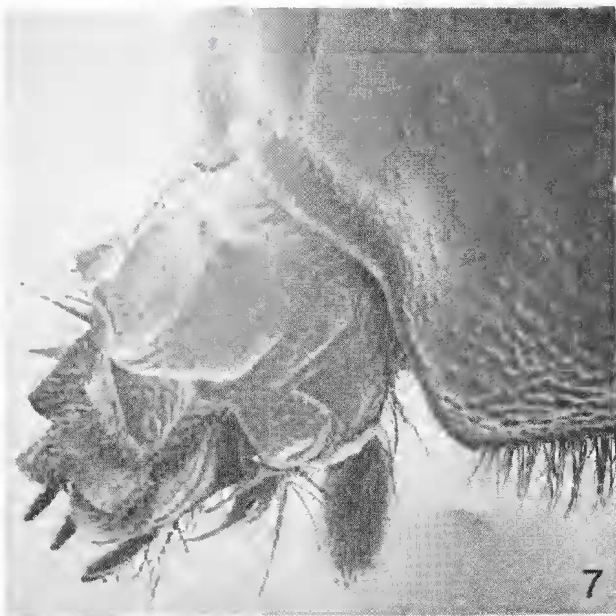
and thence to lateral horns; the U-shaped area approximately as deep as wide. Frons and vertex behind clypeal horns concave except for low, rounded, longitudinal median ridge extending posteriorly to slender horn at base of vertex (Fig. 3). Gena and vertex laterally with scattered coarse punctures, central concave portion of vertex with widely scattered, fine punctures. Pronotum with midline distinctly indented, punctate; on each side on anterior third behind eyes a shallow, punctate indentation delimits an impunctate convexity; pronotum in anterior lateral two-thirds with irregular coarse punctures. Scutellum longitudinally shallowly concave; surface of concavity dull, slightly irregular and with scattered fine punctures. Elytral striae moderately indented, finely punctate; intervals moderately convex, smooth, impunctate. Metasternum narrowing anteriorly to sharply pointed apex, anterior face vertical (metasternum very similar to *nigricornis*, Fig. 22). Genital capsule (Fig. 17) evenly narrowed to acutely rounded apex. Genitalia (Fig. 18) with upper lobe of each paramere evenly arcuate to acutely pointed apex.

*Allotype*: Female, length 7.1 mm, greatest width 4.4 mm. Similar to male except in following respects: colour brown (specimen teneral), clypeus rising less abruptly, clypeal horns poorly developed; frons and vertex less concave, horn of vertex low, rounded; rounded longitudinal ridge extending anteriorly from base of horn less well defined than in male.

Variation not mentioned in the description is slight. The single female paratype measures 6.6 mm in length and 4.2 mm in greatest width. The clypeal carina and the horn on the vertex are both poorly developed, and distinctly abraded. If the sexual differences in the horns of the head can be shown to be consistent, then *S. brittoni* must be considered to be the most obviously dimorphic species in the genus.

*Stenaspidius brittoni* is most closely related to *S. nigricornis*, differing from *nigricornis* in the following major characters: horn of vertex not transverse, rounded at apex; a low, rounded, longitudinal carina extending anteriorly from base of horn; genital capsule (Fig. 17) more acutely rounded at apex; genitalia (Fig. 18) with parameres evenly arcuate to acutely pointed apices.

The species is named in honour of Dr. E. B. Britton, who has greatly facilitated my studies on the Australian Geotrupinae.



Figs. 7-12. *Stenaspidius albosetosus*: 7, Head of male from Queensland; 8, Head of male from Western Australia; 9, Male genital capsule, Queensland specimen; 10, Frontal view of male genitalia, Queensland specimen; 11, Lateral view of male genitalia, Queensland specimen; 12, Lateral view of male genitalia, Western Australian specimen.

Type material: Holotype, male, no data (SAM). Allotype, female, Melville, Western Australia, No. 73/798 (WAM). Paratype, 1 female, Bunbury, Western Australia, Whitlock (AM).

***Stenaspidius matthewsi* n. sp.**

(Figs. 5, 15, 16, 21)

Holotype: Male, length 7.2 mm, greatest width 4.5 mm. Colour dorsally very dark brown to black, ventral surfaces dark brown. Clypeus (Fig. 5) gradually sloped upward, at  $10^\circ$  to  $15^\circ$ , to low posterior carina; carina with three poorly developed horns, median one most prominent; U-shaped carina on either side anterior to median horn, irregular in shape. Vertex centrally with slightly bifid, transverse swelling. Entire dorsal surface of head coarsely, irregularly punctate. Pronotum (Fig. 5) with midline shallowly indented, on either side on anterior third of pronotum two or three vague, low convexities present; entire surface of pronotum except for posterior median sixth, coarsely punctate, with fine secondary punctures interspersed. Scutellum longitudinally concave; concave surface dull, granular, with two or three coarse punctures vaguely indicated near base. Elytral striae moderately deep for genus, finely punctate; intervals smooth, evenly convex longitudinally. Metasternum (Fig. 21) distinctly narrowed and carinate anteriorly, apex in lateral view broadly rounded, lobe-shaped. Genital capsule (Fig. 15) broad, tapering abruptly in apical third to rounded tip. Genitalia (Fig. 16) with parameres relatively broad, dorsally angulate before rounded apices.

Allotype: Female, length 7.7 mm, greatest width 4.8 mm. Similar to male in all major external characters except median bifid tumosity of vertex slightly larger, probably a function of the larger size.

Variation in the small series is negligible. Size ranges from 7.0 to 9.1 mm with females averaging larger than males. Width varies from 4.3 to 5.8 mm. The number of coarse punctures in the median, posterior third of the pronotum shows some minor variation. In other respects the characters seem quite stable.

*Stenaspidius matthewsi* can be readily separated from the other species in the genus by the following combination of characters: posterior clypeal carina low, horns poorly developed; pronotum and head dorsally heavily, closely punctate; pronotal midline shallowly indented; male genitalia as in Fig. 16.

It gives me considerable pleasure to name this species in honour of Dr. E. G. Matthews who has assisted me in many ways. We found the present species in open sandy areas along with several other species of Geotrupinae. One five foot square area when excavated to a depth of about 18 inches yielded eight *Stenaspidius matthewsi* and five *Eucanthus felschei* Boucomont. There was little surface evidence of burrows and no indication of any food, except possibly some rich, black deposits of humus in the soil (humus is used as larval food by some North American Bolboceratini; see Howden, 1955).

Type material: Holotype, male, 50 km E. Kalbarri, W. Australia, 6th August, 1972, E. G. Matthews (SAM). Allotype, female, same data as holotype (SAM). Paratypes, 3 males, 5 females: 3, same data as holotype; 4, 51 km E. Kalbarri, near Murchison River, W.A., 30th July, 1972, 6th August, 1972, H. F. Howden; 1, Highway 1, 59 km north of Murchison River, W.A., 4th August, 1972, H. F. Howden.

Paratypes are in the following collections: ANIC, SAM, Howden.

***Stenaspidius ruficornis* Boucomont**

(Figs. 4, 13, 14, 24)

*Bolboceras (Stenaspidius) ruficornis* Boucomont, 1906, p. 452.

Males: Length 6.5 to 8.4 mm, greatest width 4.3 to 5.5 mm. Colour dorsally dark reddish brown, frequently head and pronotum black, antennal club usually reddish. Clypeus (Fig. 4) rising abruptly ( $90^\circ$ ) to trituberculate posterior carina, the elevated trituberculate portion of carina distinctly narrower than width of clypeus; anterior face with indistinct, irregularly U-shaped carina, the area encompassed deeper than wide. Clypeus, frontal area and gena with irregular, shallow, large puncture; frontal area behind clypeal carina concave, horn of vertex further forward than in *nigricornis*, transverse and slightly bifid at apex. Height of clypeal carina and of horn on vertex proportional to overall size, increasing in development as size increases. Pronotum with midline distinctly indented, on either side of anterior third of pronotum a second indented line, these indentations delimiting four broad, low, circular convexities; a pronounced transverse concavity present on pronotum behind head between anterior margin and circular convexities. Pronotal surface coarsely punctate on lateral thirds and to a lesser degree in indentations; convex areas largely impunctate. Scutellum longitudinally concave, concave surface irregularly, vaguely ridged and granular. Elytral striae moderately deep, finely

punctate; intervals moderately convex, either smooth or with vague transverse wrinkles. Metasternum (Fig. 24) carinate, the carina when viewed laterally with apex rounded to nearly vertical anterior face. Genital capsule (Fig. 13) apically moderately broadly rounded in outline. Genitalia (Fig. 14) with dorsal portion of each paramere produced into a slender cylindrical arch.

Females: Length 7.2 to 9.1 mm, greatest width 4.7 to 5.8 mm. Externally not differing noticeably from males, the degree of development of the clypeal carina and of the horn of the vertex being associated with size rather than showing any sexual dimorphism.

The high, narrowed, trituberculate clypeal carina, the forward position of the horn of the vertex in line with the anterior edges of the eyes, and the reddish antennal club are characters that distinguish *ruficornis* from the other *Stenaspidius*. The male genitalia (Fig. 14) are also very distinctive and the range is apparently allopatric from others in the genus.

*Types*: Boucomont (1906) lists three specimens (cotypes): two from New South Wales, Australia, in the "Deutsches Entomologisches National Museum" (=Deut. Ent. Institute, Berlin?) and one female labelled "Australia, ex Musaeo Van Lansberge", now in the Paris Museum (MNHN). Since the species is easily recognizable and since I have seen only the Paris specimen, a lectotype designation does not seem to be necessary or advisable at present.

*Material examined*: Twenty-five specimens with the following data: 2—Australia: 2—S. Australia: 1—Adelaide, S. Australia: 1—Lucindale, South Australia: 2—Caulfield, Victoria, 3rd October, 1908, June, 1906; 3—North Melbourne, Vict.; 1—Nova Holland, 50404, ex Mus. Murray; 1—Portland, Vict., January, 1938, C. Oke; 1—Raymond Isl. near Bairnsdale, Vict., 21st October, 1907, W. W.; 1—Seaford, Vict., 4—Wannon, Hamilton, Vict., 10th October, 1947, B. B. Given; 6—Victoria.

Specimens are in the following collections: ANIC, BM, MNHN, NMV, SAM, Howden.

#### *Stenaspidius albosetosus* n. sp.

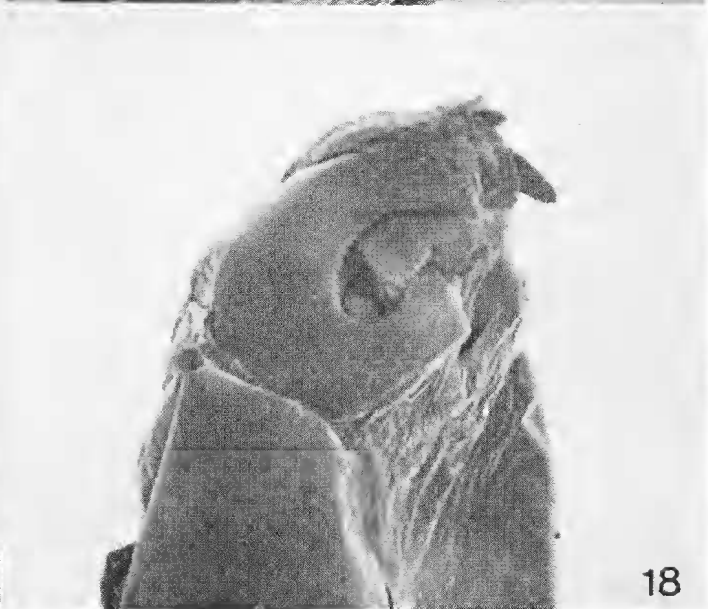
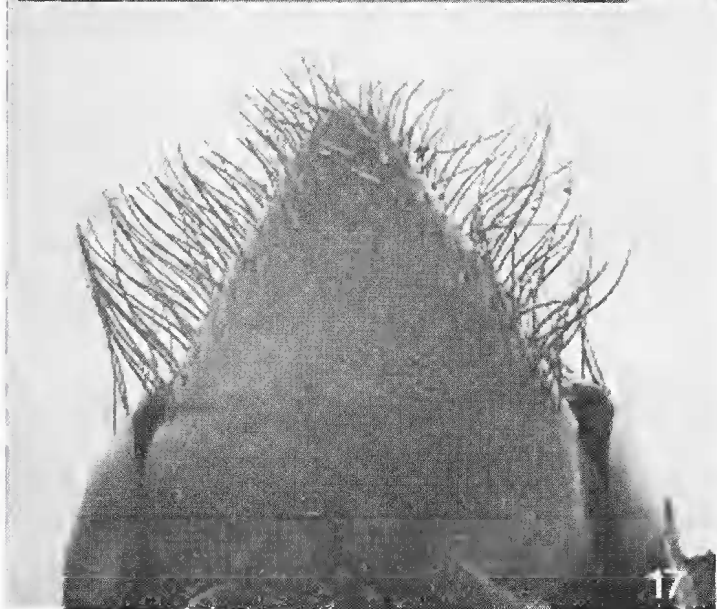
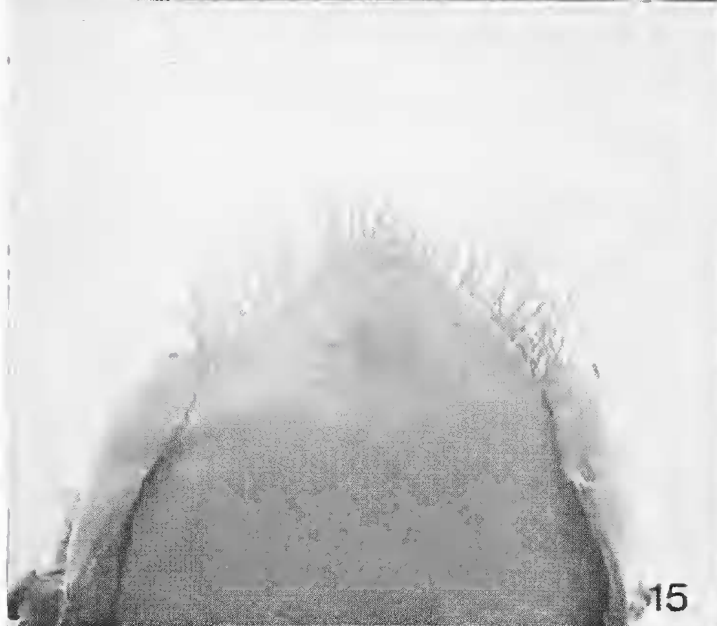
(Figs. 6, 7, 8, 9, 10, 11, 12, 23)

*Holotype*: Male, length 9.1 mm, greatest width 5.5 mm. Colour very dark brown with head, pronotum and scutellum black; base of the antenna, sides of prothorax (on ventral surface), and base of scutellum densely fringed with conspicuous, white setae; (in other species setae are

less numerous and yellow, buff, or tan in colour). Clypeus (Fig. 7) rising abruptly to median anterior horn, gradually sloped upward to low, lateral portions of posterior carina; surface of clypeus divided into nearly equal thirds by U-shaped carina on either side of median tubercle or horn. Vertex posteriorly (Fig. 7) with low, slightly bifid transverse median tubercle; surface of frons and vertex between tubercle and clypeal carina flat or slightly concave and with scattered fine punctures. Pronotum (Fig. 7) with midline slightly to coarsely punctate and shallowly indented, a transverse line of punctures present at anterior third; marginal line behind head thickened, rounded; behind this pronotal surface transversely concave, coarsely punctate; pronotal surface behind eyes shallowly, broadly concave; pronotal surface coarsely punctate laterally (Fig. 6) and in a band near posterior third, elsewhere surface largely smooth and shining. Scutellum slightly concave medially; surface closely, irregularly, coarsely punctate, less so along lateral margins. Elytral striae moderately indented, finely to obsoletely punctate; intervals moderately convex, smooth and shining. Metasternum (Fig. 23) with midline distinctly indented, except anteriorly, not carinate anteriorly; metasternum anteriorly broadly rounded; surface with numerous coarse punctures. Genital capsule (Fig. 9) broad near abruptly rounded apex, dorsal surface near apex flat to shallowly concave. Genitalia (Figs. 10, 11) with each paramere bent, then thickened before acute apex; lower lobe of each paramere slender and sharply hooked near midline.

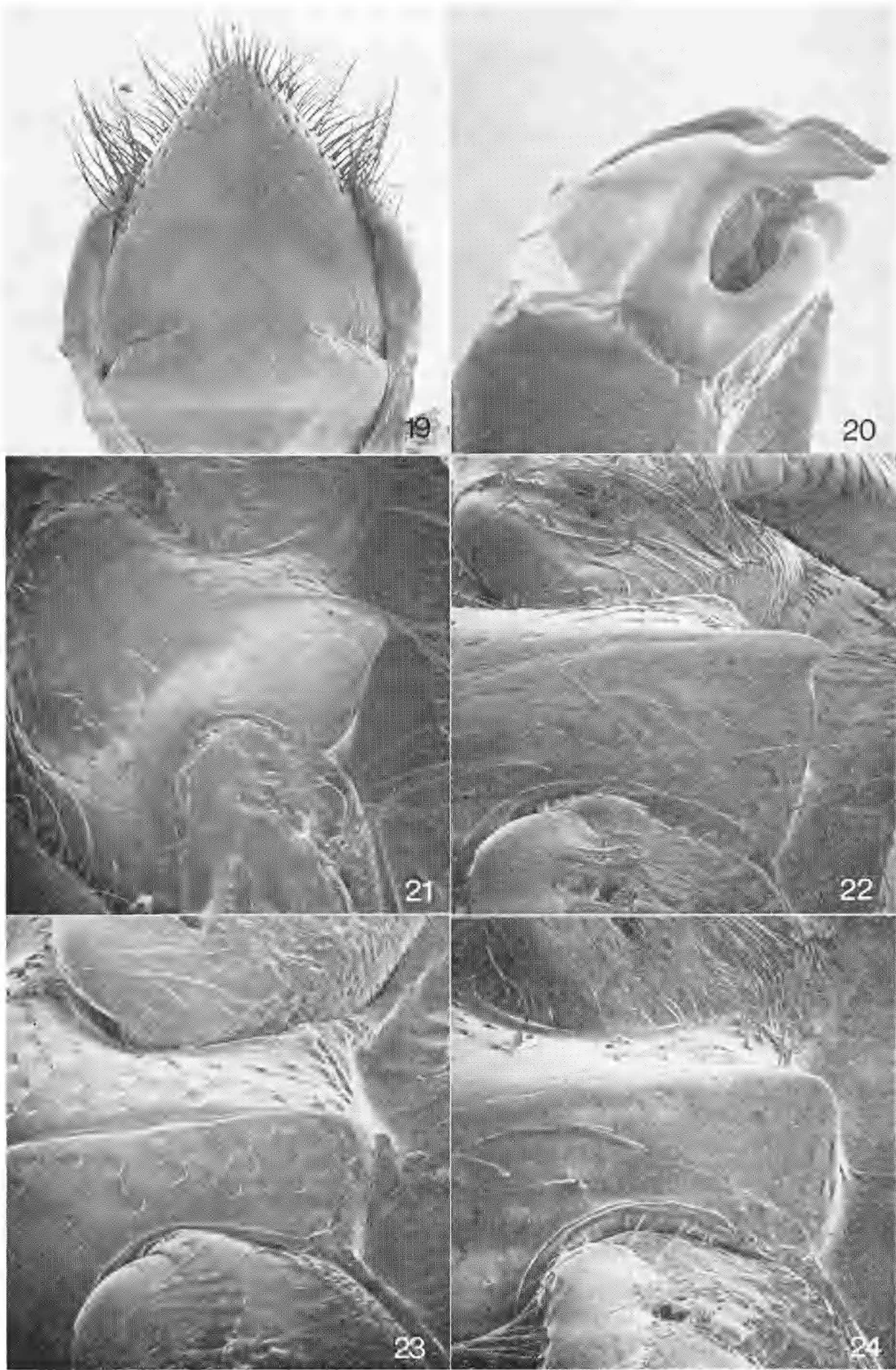
*Allotype*: Female, length 9.3 mm, greatest width 5.4 mm. Externally differing only slightly from holotype in the following respects: anterior pronotal concavities smaller and shallower; punctate areas similar but punctures smaller and more numerous; punctures of elytral striae slightly larger and better developed.

*Stenaspidius albosetosus* ranges widely across northern Australia from Queensland to Western Australia. Variation in the series at hand is of two types, local and geographic. The small series from Cairns, Queensland, varies from 6 to 8 mm in length and from 3.5 to 5.5 mm in greatest width. The smallest specimen of this series has the head and much of the pronotum heavily punctate, the pronotal concavities obsolete, and the elytral striae distinctly deeper and more heavily punctate than in the other specimens. The degree of this "local" type of variation is considerable, being equal to or exceeding the variation noted for the other species in the genus.



Figs. 13-18. *Stenaspidius* spp.: 13, Male genital capsule of *S. ruficornis*; 14, Male genitalia of *S. ruficornis*; 15 Male genital capsule of *S. matthewsi*; 16, Male genitalia of *S. matthewsi*; 17, Male genital capsule of *S. brittoni*; 18, Male genitalia of *S. brittoni*.





Figs. 19-24. *Stenaspidium* spp.: 19, Male genital capsule of *S. nigricornis*; 20, Male genitalia of *S. nigricornis*; 21, Metasternum of *S. matthewsi*; 22, Metasternum of *S. nigricornis*; 23, Metasternum of *S. albosetosus*; 24, Metasternum of *S. ruficornis*.

Geographic variation is also evident and specimens from Queensland are consistently different from those occurring in the Northern Territory or in Western Australia. It could be argued that populations from these different areas should be recognized as taxonomically distinct. However, since the few specimens on hand seem to show concordant clinal variation, I consider the different forms as variants of one species. The major variation occurs in the development of the horns of the head, in the size and depth of the anterior pronotal concavities, in the shape of the apex of the genital capsule, and in the shape of the parameres of the male genitalia.

In specimens from Queensland the elypeal earina is only slightly lower than the three tubercles (or horns). The tubercles are small and generally equally developed. The tubercle (or horn) on the vertex is low and vaguely to moderately bifid. The anterior pronotal concavities vary from obsolete to shallow (Fig. 7) but distinct; distinct convex ridges surrounding the concavities are lacking. The male genital capsule is moderately broad and rounded at the apex. The male genitalia (Figs. 10, 11) have the parameres moderately thickened near the tips and the lower lobes slender and hooked.

In specimens from the Northern Territory and Western Australia the clypeal earina is distinctly lower than the well developed tubercles or horns. The horn on the vertex is usually distinctly bifid (Fig. 8). The anterior pronotal concavities (Fig. 8) are deep, being surrounded laterally and posteriorly by convex ridges. The male genital capsule is flattened near the apex and very broadly rounded. The male genitalia (Fig. 12) have the parameres more distinctly

thickened near the tips and the lower lobes wider. These differences seem to be consistent geographically, but with the differences discussed being based upon six specimens, my conclusions are tentative.

*Stenaspidius albosetosus* is at present the only member of the genus known to occur in the northern third of Australia. The numerous, long, white setae on the basal segments of the antennae and on the underside of the prothoracic margin will identify the species. Also the male genitalia are very distinctive.

Type material: Holotype, male, Yeppoon, Queensland, 20th December, 1969, H. Evans and R. W. Matthews (ANIC). Allotype, female, same data as holotype (ANIC). Paratypes, 18 specimens: 5, Cairns, (N.) Queensland, (1) E. W. Ferguson; 1, Little Mulgrave R., Qld., Hacker; 1, Ravenshoe—Mt. Garnet Road., Archers Creek, N. Qld., Australia, 11th January, 1962, E. B. Britton; 1, Roekhampton, Qld., 23rd March, 1950, I. F. B. Common; 2, Townsville, Qld., (1) N. B. Tindale, (1) 24th December, 1902, F. P. Dodd; 1, N. Queensland; 1, Q. (Victoria) (=museum?) Coll. French; 2, Berrimah Farm, N.T., 27th January, 1956, L. D. Crawford; 1, Daly R., N.T., H. Wessliwan; 2, 80 km E. of Daly Waters on Borroloola Road, N.T., 20th March, 1972, A. Allwood and T. Angeles; 1, Wyndham, W.A., 15th December, 1953, G. Luking, K. R. S., Light Trap.

Paratypes are in the following collections: ANIC, BM, MNHN, NTA, SAM, Howden.

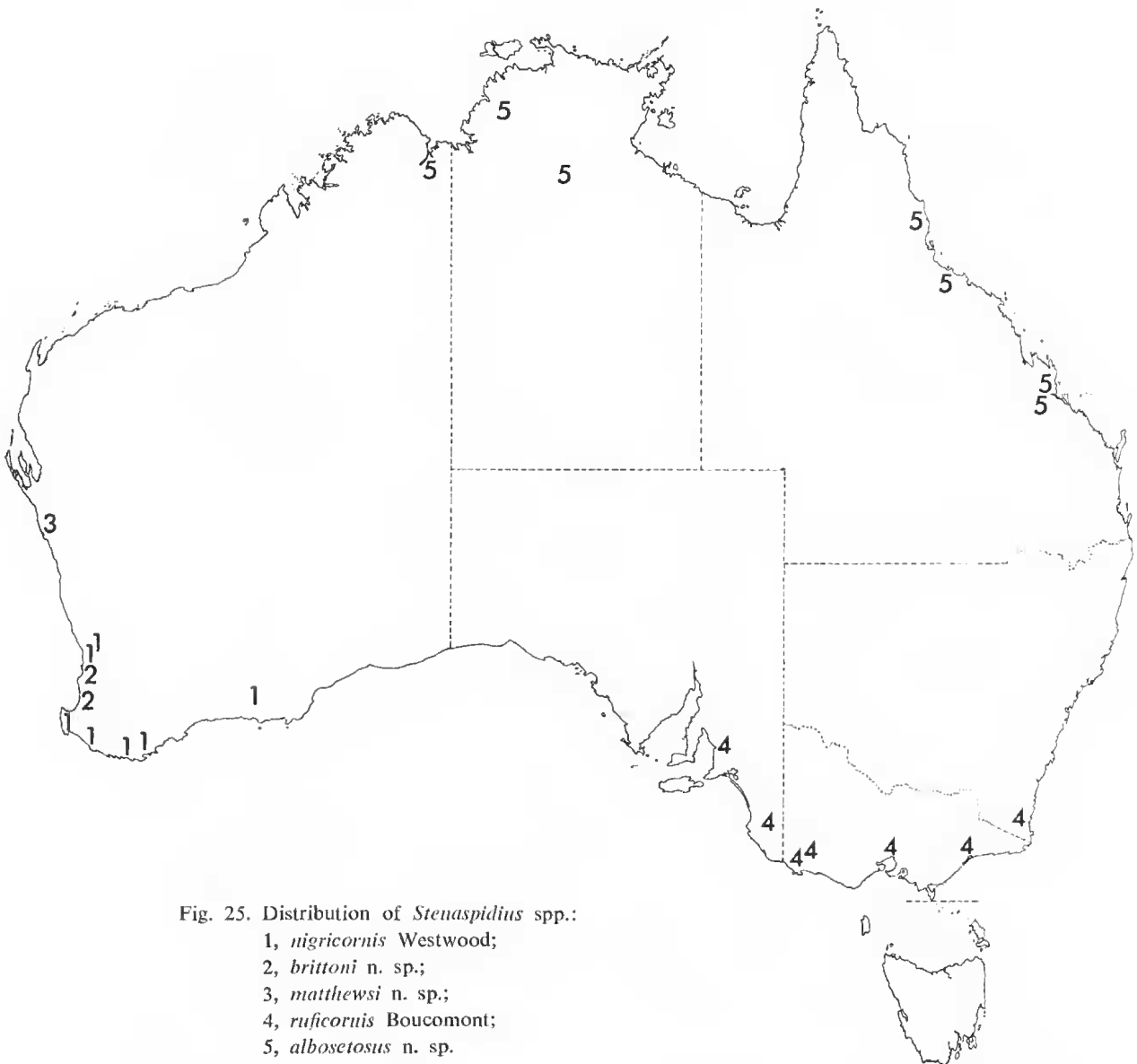


Fig. 25. Distribution of *Stenaspidius* spp.:

- 1, *nigricornis* Westwood;
- 2, *brittoni* n. sp.;
- 3, *matthewsi* n. sp.;
- 4, *ruficornis* Boucomont;
- 5, *albosetosus* n. sp.

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